

10/719,665

We claim:

1. A low-gloss dry-erasable multilayer composite comprising a first layer having a dry-erasable outer surface and a second layer having a microroughened surface.
2. The composite of claim 1, wherein the first layer is in direct physical contact with the microroughened surface of the second layer.
3. The composite of claim 1, wherein the first layer is transparent.
4. The composite of claim 1, wherein the first layer is translucent.
5. The composite of claim 1, further comprising a substrate layer on the opposite side of the second layer from the first layer.
6. The composite of claim 1, wherein the microroughened surface comprises a random distribution of ridges and valleys.
7. The composite of claim 1, wherein the microroughened surface is formed by cure-induced surface wrinkling.
8. The composite of claim 1, wherein the microroughened surface comprises an ordered pattern of positive features and/or negative features.
9. The composite of claim 1, wherein the microroughened surface comprises an ordered pattern of ridges and valleys.
10. The composite of claim 1, wherein the second layer is formed from acrylic monomers or oligomers, methacrylic monomers or oligomers, N-vinyl pyrrolidine, urethane acrylic oligomers and epoxy acrylate oligomers.

Rule  
126

Rule 26

10/719,665

11. The composite of claim 1, wherein the second layer is formed from a radiation-crosslinkable polyurethane acrylate copolymer.

12. The composite of claim 1, wherein the first layer is formed from a coating comprising a fluoropolymer.

13. The composite of claim 1, wherein the first layer is a laminated sheet comprising a fluoropolymer.

14. The composite of claim 1, wherein the first layer is formed from a coating composition comprising a polymer comprising at least one pendant fluoroalkoxyalkyl functionality.

15. The composite of claim 1, wherein the first layer is formed from a coating composition comprising a polymer comprising pendant fluorine-containing functionality derived from a fluorooxetane.

16. The composite of claim 1, wherein the first layer is formed from a polyester-based polyfluorooxetane copolymer crosslinked with an amine resin crosslinking agent.

17. The composite of claim 17, wherein the amine resin crosslinking agent is a co-etherified melamine formaldehyde resin reaction product of melamine and at least two different C<sub>1</sub> to C<sub>10</sub> alcohols.

18. The composite of claim 17, wherein the amine resin crosslinking agent is a co-etherified melamine formaldehyde resin reaction product of melamine methanol and butanol.

19. The composite of claim 1, wherein the composite exhibits a surface gloss of about 40 or less when measured at an angle of incidence 60°.

Rudle  
126

20

21. The composite of claim 1, wherein the composite exhibits a surface gloss of about 25 or less when measured at an angle of incidence 60°.

21

22. The composite of claim 1, further comprising a layer of adhesive coated on the opposite side of the second layer from the first layer.

22

23. The composite of claim 5, further comprising a layer of adhesive coated on the substrate layer on the opposite side of the substrate layer from the second layer.

23

24. A process for making a low-gloss dry-erasable multilayer composite comprising a first layer and a second layer comprising the steps of:

a) imparting a microroughened surface to the second layer, and

b) applying a first layer to the second layer so that the resulting multilayer composite has a dry-erasable outer surface.

24

25. The process of claim 24, wherein the second layer being made from a radiation-curable material, and the microroughened surface is imparted by subjecting the second layer to a curing operation in which the second layer is irradiated under conditions to form microwrinkles in its uppermost surface.

25

23

26. The process of claim 24, wherein the uppermost surface of the second layer is partially cured in a first curing step thereby causing microwrinkles to form in this uppermost surface, and then the second layer is subjected to a second curing step in which the entire second layer is cured.

24

25

27. The process of claim 26 in which curing in the first and second curing steps are accomplished by irradiation of the second layer with light at different wavelengths.

10/719,665

File  
126

27

28. The process of claim 26 in which curing in the first and second curing steps are accomplished by irradiation of the second layer with light at the same wavelengths but different intensities.

25

29. A composition for forming a dry-erasable surface layer comprising a polyester-based polyfluorooxetane crosslinked with an amine resin crosslinking agent in which the amine resin crosslinking agent is a co-etherified melamine formaldehyde resin reaction product of melamine and at least two different C<sub>1</sub> to C<sub>10</sub> alcohols.

29

30. The composition of claim 30, wherein the amine resin crosslinking agent is a co-etherified melamine formaldehyde resin reaction product of melamine methanol and butanol.

29